

REMARKS

The above amendments and the following remarks are being submitted as a full and complete response to the Office Action dated June 16, 2008. In view of the above amendments and the following remarks, the Examiner is respectfully requested to give due reconsideration to this application, to indicate the allowability of the claims, and to pass this case to issue.

Status of the Claims

Claims 1, 3-8 and 10-11 are under consideration in this application. Claims 2 and 9 are being cancelled without prejudice or disclaimer. Claims 1, 13 and 15 are being amended to correct formal errors and to more particularly point out and distinctly claim the subject invention. All the amendments to the claims are supported by the specification. Applicants hereby submit that no new matter is being introduced into the application through the submission of this response.

Double Patenting Rejection

Claims 13 and 15-20 were provisionally rejected under the doctrine of nonstatutory obviousness-type double patenting as being unpatentable over claims 4-5, 7-10, 12 and 14 of co-pending US Pat. App. No. 10/576,878. A terminal disclaimer is being concurrently filed as suggested by the Examiner to overcome this double patenting rejection.

Prior Art Rejection

Claims 1, 3, 6-8, 10-13 and 15-20 were rejected 35 U.S.C. §103 (a) as being unpatentable over Ohba et al. (WO 99/52973; US 6,605,344). These rejections have been carefully considered, but are most respectfully traversed, as more fully discussed below.

The stretched-formed multilayer container of claim 1 is formed by stretching a multilayer sheet or a multilayer preform at an area draw ratio of 1.1 to 100 times, said multilayer sheet or said multilayer preform comprising a layer (a) made of a thermoplastic resin (A) and at least one layer unit of a (bc)/(de) layer unit or a (de)/(bc) layer unit which is arranged on at least one surface of layer (a) with or without an adhesive backing, said (bc)/(de) layer unit or said (de)/(bc) layer unit consisting of a layer (bc) made of a mixture of a polycarboxylic acid-based polymer (B) and a plasticiser (C) and a layer (de) made of a mixture of a bivalent metal compound (D) and a resin (E), said layer (bc) and said layer (de)

being adjacent to each other, said layer (bc) being formed without heating operation, and said multilayer sheet or said multilayer preform containing a bivalent metal compound (D) so that the chemical equivalent of a bivalent metal in the total amount (Dt) of the bivalent metal compound (D) is 0.2 or more relative to the total amount (Bt) of carboxyl groups contained in the layers (bc) and (de).

The invention of claim 13 is also directed to a method of manufacturing the stretched-formed multilayer container of claim 1.

According to the present specification, the multilayer sheet and the multilayer preform according to the present invention is obtained by not employing the heating operations which facilitate esterification of hydroxyl groups of the plasticiser (C) and carboxyl groups of the polycarboxylic acid-based polymer (B) (p. 19, lines 18-25). Specifically, in the present invention, the layer (bc) in the multilayer sheet and the multilayer preform have not been subjected to heat-treatment.

On the other hand, the prior art film described in background art of the present specification is the mixture of a poly (meth) acrylic acid polymer and a polyalcohol polymer which needs to be denatured by a predetermined treatment (e.g., heat treatment) for the gas barrier resin composition or gas barrier film to have sufficient oxygen-gas barrier properties and resistance properties to high-temperature water vapor and hot water, and that molded materials made of the mixture are not stretchable (p. 3, line 17 to p. 4, line 1.)

In Ohba, *"after completion of heat treatment, the resultant polymer layer has water resistance and exhibits excellent gas-barrier properties under high humidity."* (Col. 9, lines 51-54). *"In order to impart some degree of water-resistance and gas-barrier properties to the polymer layer, at least the polymer layer is preferably subjected to heat treatment* (Col. 3, lines 48-51).*"* In Ohba, to obtain the polymer layer having a sufficient gas barrier property, the heat treatment is an indispensable process. In fact, all of the gas-barrier films obtained in examples described in Ohba are obtained by employing heat treatment. The composition of the stretched-formed multilayer container of the present invention and the effects achieved by the stretched-formed multilayer container were unknown to and unexpected by Ohba.

As admitted by the Examiner (p. 5, line 19 of the outstanding Office Action), Ohba is silent regarding stretched forming the laminate as in the present invention.

In addition, Ohba discloses that *"the process for forming a polymer layer from the above-prepared composition is not particularly limited. For example, a "polymer layer" is obtained through any of the following processes: a process in which an aqueous solution*

containing a polymer mixture at high concentration is applied onto a plastic film, and the film is *stretched under heating* (col. 6, line 27-39).” However, Ohba is silent regarding stretched-forming the laminate comprising the polymer layer obtained by the process of the present invention.

Ohba also mentions a “stretched nylon film” (e.g., Examples 12-13, col. 14, lines 25-35). For example, “*In order to impart strength or sealability to the gas-barrier film of the present invention, a plastic film may further be laminated on the gas-barrier film, to thereby form a laminated gas-barrier film.... Specific examples of layer structures of laminated gas-barrier film include “stretched nylon layer”/polymer layer/metallic compound layer/non-stretched polypropylene layer, etc.* (col. 9, line 62 to col. 10, line 25).” Ohba is silent regarding stretched-forming the laminate of the present invention.

By stretching the multilayer sheet or multilayer preform including the layer (bc) formed without heating with an area draw ratio of 1.1 to 100, the present invention provides the stretched-formed multilayer container with excellent oxygen-gas barrier properties and thinner films, i.e., better performance and lower production costs (p. 6, lines 5-12; p. 42, lines 1-7). The above-mentioned effects achieved by the present invention are unexpected from Ohba.

Moreover, by using the polycarboxylic acid-based polymer (B) with an oxygen permeability coefficient of $1,000 \text{ cm}^3 (\text{STP}) \cdot \mu\text{m} / (\text{m}^2 \cdot \text{day} \cdot \text{MPa})$ or less at 30°C and relative humidity of 0% when formed into a film by itself (p. 11, lines 10-17), the present invention provides a stretched-formed multilayer container having an oxygen permeability coefficient **no greater than 200 (or even 100)** $\text{cm}^3 (\text{STP}) \cdot \mu\text{m} / (\text{m}^2 \cdot \text{day} \cdot \text{MPa})$ or less at 30°C and relative humidity of 80% (p. 25, lines 15-19). On the other hand, Ohba’s multi-layer laminate has an oxygen transmission rate as high as $400 \text{ cm}^3/\text{m}^2 \cdot \text{day} \cdot \text{atm}$ (**~3.948** $\text{cm}^3(\text{STP})/(\text{m}^2 \cdot \text{day} \cdot \text{MPa})$) as measured at 30°C and 80% RH after 24 hours (col. 9, lines 39-41), which is much worse than the present invention. Such low oxygen permeability coefficients were unexpected by Ohba, and will not naturally flow from the teachings of Ohba.

Applicants contend that the cited references and their combinations fail to teach or suggest each and every feature of the present invention as recited in at least independent claims 1 and 13. As such, the present invention as now claimed is distinguishable and thereby allowable over the rejections raised in the Office Action. The withdrawal of the outstanding prior art rejections is in order, and is respectfully solicited.

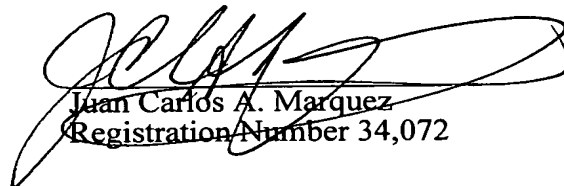
Conclusion

In view of all the above, Applicants respectfully submit that certain clear and distinct differences as discussed exist between the present invention as now claimed and the prior art references upon which the rejections in the Office Action rely. These differences are more than sufficient that the present invention as now claimed would not have been anticipated nor rendered obvious given the prior art. Rather, the present invention as a whole is distinguishable, and thereby allowable over the prior art.

Favorable reconsideration of this application as amended is respectfully solicited. Should there be any outstanding issues requiring discussion that would further the prosecution and allowance of the above-captioned application, the Examiner is invited to contact the Applicants' undersigned representative at the address and telephone number indicated below.

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